Iowa Department of Natural Resources
UST Cathodic Protection Inspection Form

May 2001

Iowa UST Site Registration Number:	**Date:**
Cathodic protection system is: [ ] Galvanic [ ] Impressed current	**Date Installed:**

Facility Information		
Facility Name:		
Address:	City:	ZIP Code

Cathodic Protection Tester	
Tester Name:	
Company Name:	
Address:	
City: State Zip Code	Phone Number:
Tester Qualifications/Training (567-Chapter 135 IAC, Definitions): If NACE Certified Provide Certification No.	

Weather Conditions:	
Temperature:	Soil/Backfill Conditions (circle): moist dry sand gravel soil

Minimum Inspection Requirements Checklist

( ) Reviewed the cathodic protection system's design: location of tanks, lines, anodes, testing locations, and structure to soil potential readings. For impressed current systems include structure to soil native potential readings and rectifier amp and voltage settings.

( ) Reviewed record of previous cathodic protection system inspection: tank to soil potential readings, test locations, and previous inspectors comments and observations. For impressed current systems, review the record for previous rectifier amp and voltage readings and record current readings.

( ) Provided site diagram with testing locations properly marked.

( ) Tested the system for electrical continuity: tanks, product lines, flex connectors, vent lines, conduit and other tank system equipment.

( ) Conducted structure to soil potentials on all protected tanks, piping, and flex connectors. A minimum of three per tank along the center line, at the ends and middle. For each product line, tested above piping at the ends and middle (away from anode locations). Conducted additional tests on long piping runs.

( ) For impressed current system, conducted structure to soil potentials for rectifier instant off readings. For polarization readings not meeting the –850 mV requirement, tested for 100 mV polarization decay.

( ) For impressed current system, checked rectifier operation and current to anodes at any junction boxes in system. Asked owner if any physical changes have been made at site since installation.

( ) Provided written explanation to the site owner on the cathodic protection systems operating status, recommendations, and any repairs and attached it to this form.

Cathodic Protection System Certification

The cathodic protection system is operating according to its design standards and is providing cathodic protection to the tanks and product lines: **[ ] Yes [ ] No**

_____ _____

Signature of Tester Date

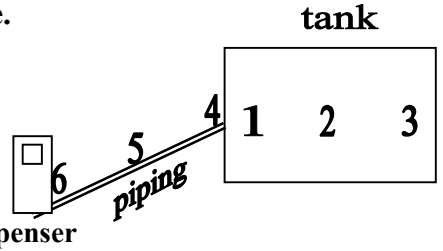
Registration No. _____ Facility Name: _____

Site Diagram

Sketch the facility below showing tanks, piping, buildings, vent lines and dispenser islands. Include all surface openings to tanks for pumps, fill pipes, tank monitoring, etc. Provide tank identification.

On the diagram identify reference cell test locations with an "R" and a sequential number (R1, R2, etc.). Do the same for structure locations using "S" (S1, S2, etc.).

Minimum test locations for <u>each</u> tank & line.



When taking structure to soil potential readings, the reference cell must be as close to the structure as possible and be in direct contact with the soil or backfill material around the tank and piping. For tank potential readings, soil or backfill may be accessed through openings for pump risers, tank monitors, etc. directly above tank when available. Permanent cathodic protection monitoring stations providing access to soil or backfill may need to be established through concrete or asphalt paving above tank and piping. <u>Do not take structure to soil potential readings with the reference cell directly on concrete or asphalt paving. Potential readings made in this manner are not valid and will not be accepted.</u>

Rectifier Readings (for impressed current system only)

Design settings: Amperes _____ Volts _____

Current readings: Amperes _____ Volts _____

Comments:

Registration No. ________________ Facility Name: ____

CONTINUITY MEASUREMENTS (in millivolts)				STRUCTURE TO SOIL POTENTIAL MEASUREMENTS (All Potential Measurements in **millivolts**)					
Location Code*	Location Description	Voltage (mV)		Location Code*	Location Description	System Operating Potential	Rectifier Instant Off Potential	Rectifier Off Final Potential (Native)	Potential Shift
Tank #	Volume ____________			Product ___________________			Impressed current systems only		
R __				S __					
S __				R __					
S __				R __					
S __				R __					
S __				R __					
S __				R __					
S __				R __					
Tank #	Volume ____________			Product ___________________			Impressed current systems only		
R __				S __					
S __				R __					
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Tank #	Volume ____________			Product ___________________			Impressed current systems only		
R __				S __					
S __				R __					
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S __				R __					
S __				R __					
S __				R __					
Tank #	Volume ____________			Product ___________________			Impressed current systems only		
R __				S __					
S __				R __					
S __				R __					
S __				R __					
S __				R __					
S __				R __					
S __				R __					
COMMENTS									

*** R = reference electrode location, S = structure contact**

Registration No. ________________ Facility Name: ____

CONTINUITY MEASUREMENTS (in millivolts)			**STRUCTURE TO SOIL POTENTIAL MEASUREMENTS** (All Potential Measurements in **millivolts**)					
Location Code*	Location Description	Voltage (mV)	Location Code*	Location Description	System Operating Potential	Rectifier Instant Off Potential	Rectifier Off Final Potential or Native	Potential Shift
Tank # Volume ____________			Product ____________________			Impressed current systems only		
R __			S __					
S __			R __					
S __			R __					
S __			R __					
S __			R __					
S __			R __					
S __			R __					
Tank # Volume ____________			Product ____________________			Impressed current systems only		
R __			S __					
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Tank # Volume ____________			Product ____________________			Impressed current systems only		
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Tank # Volume ____________			Product ____________________			Impressed current systems only		
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S __			R __					
S __			R __					

COMMENTS

*** R = reference electrode location, S = structure contact**